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| 09/742,657   | 12/21/2000  | Hidenori Nishikawa   | JP9 1999 0204 US1            | 6991             |
| 7590   | 01/24/2005  |                      |                              |                  |
| Hoffman, Warnick & D'Alessandro LLC<br>Three E-Comm Square<br>Albany, NY 12207 |             |                      | EXAMINER<br>MAHMOUDI, HASSAN |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 2165                         |                  |

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/742,657

Applicant(s)

NISHIKAWA, HIDENORI

Examiner

Tony Mahmoudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-11 is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/01/04 2 pages.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after Final Rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's Request for Continued Examination (RCE) submission filed on 03-November-2004 has been entered. In addition, the "After Final" amendment filed on 09-August-2004 has been entered for the continued examination of this application.

### ***Remarks***

2. In response to the After Final amendment filed on 09-August-2004 (now entered), claim 12 was canceled, claim 3 was amended to overcome a rejection made under 35 U.S.C. 112, second paragraph, and new claims 13-16 were added by the applicant.
3. Further, in response to the recent amendment accompanying the Request for Continued Examination (RCE), filed on 03-November-2004, claim 5 has been cancelled per applicant's request. Therefore, claims 1, 3-4, 6-11, and 13-16 are presently pending in the application, of which, claims 1, 6, 13 and 16 are presented in independent form.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mital et al (U.S. Patent No. 6,189,012) in view of Campbell et al (U.S. Patent No. 6,292,801.)

As to claim 1, Mital et al teaches a database system, for storing and managing data that are used by application programs to execute a specific operation (see Abstract), comprising:

a hierarchical node database wherein data used for the application programs are stored as node data in data records (see Abstract, and see figures 1 and 9.)

a hierarchical link table (see column 8, lines 24-30, and see figures 1, 4, and 9), provided for each of the application programs (see column 8, lines 53-58), which comprises relationship data (see column 11, lines 45-51) that defines a hierarchical structure of the node data that are stored in the hierarchical node database.

Mital et al does not teach wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure.

Campbell et al teaches network resource manager system and method (see Abstract), in which he teaches wherein the hierarchical link table (see column 8, lines 35-58, where a "link table" is read on "join table") includes effective period data (see column 8, line 63 through

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column 9, line 10) that defines effective periods for the defined hierarchical structure (see figures 4 and 8, and see column 3, lines 29-46, and see column 9, lines 11-22.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Mital et al to include wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure.

It would have been obvious to a person having ordinary skill in the art to have modified Mital et al by the teaching of Campbell et al, because wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure, would enable the user to define effective periods (start, end, and duration times) for data elements and would further enable the user to obtain information on data such as the values of particular data elements at or during a certain period of time. Also, associating effective time periods with data records, enables the system to generate a response to a history query identifies for a particular time period, one or more data resources, the network activity initiated by those data resources and ownership data linked to those data resources, as taught by Campbell et al (see column 3, lines 33-36.)

As to claim 3, Mital et al as modified teaches wherein, the hierarchical node database, includes effective period data that define the effective periods for the data records, the effective period data being stored as data entries in individual data fields (see Campbell et al, figures 3A-3C, 4, and 8, and see column 8, line 59 through column 9, line 10.)

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As to claim 4, Mital et al as modified teaches wherein each of the data records in the hierarchical node database (see Mital et al, figures 1 and 9, and see Campbell et al, figure 6) includes a fixed-length column in which only data entries having a constant size are stored (see Mital et al, figure 4, **[Links Class]** column, and see Campbell et al, figure 8, **[START DATE]** column) and a variable-length column in which only data having variable sizes are stored (see Mital et al, figure 4, **[Display name]** column, and see Campbell et al, figure 8, **[DEPARTMENT]** and **[END DATE]** columns.)

6. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mital et al (U.S. Patent No. 6,189,012) in view of Campbell et al (U.S. Patent No. 6,292,801), and further in view of Sugauchi et al (U.S. Patent No. 5,828,842.)

As to claim 13, Mital et al teaches a database system, for storing and managing data that are used by application programs to execute a specific operation (see Abstract), comprising:  
a hierarchical node database wherein data used for the application programs are stored as node data in data records (see Abstract, and see figures 1 and 9.)

a hierarchical link table (see column 8, lines 24-30, and see figures 1, 4, and 9), provided for each of the application programs (see column 8, lines 53-58), which comprises relationship data (see column 11, lines 45-51) that defines a hierarchical structure of the node data that are stored in the hierarchical node database.

Mital et al does not teach wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure.

Campbell et al teaches network resource manager system and method (see Abstract), in which he teaches wherein the hierarchical link table (see column 8, lines 35-58, where a “link table” is read on “join table”) includes effective period data (see column 8, line 63 through column 9, line 10) that defines effective periods for the defined hierarchical structure (see figures 4 and 8, and see column 3, lines 29-46, and see column 9, lines 11-22.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Mital et al to include wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure.

It would have been obvious to a person having ordinary skill in the art to have modified Mital et al by the teaching of Campbell et al, because wherein the hierarchical link table includes effective period data that defines effective periods for the defined hierarchical structure, would enable the user to define effective periods (start, end, and duration times) for data elements and would further enable the user to obtain information on data such as the values of particular data elements at or during a certain period of time. Also, associating effective time periods with data records, enables the system to generate a response to a history query identifies for a particular time period, one or more data resources, the network activity initiated by those data resources and ownership data linked to those data resources, as taught by Campbell et al (see column 3, lines 33-36.)

Mital et al as modified, still does not teach a cycle control table in which cycle data are entered to define execution timings for the application programs that execute operations at constant time intervals.

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Sugauchi et al teaches a network management operation method (see Abstract), in which he teaches a cycle control table in which cycle data are entered to define execution timings for the application programs that execute operations at constant time intervals (see column 4, line 66 through column 5, line 29, see column 11, line 50 through column 12, line 32, and see column 17, line 14 through column 18, line 65.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Mital et al as modified, to include a cycle control table in which cycle data are entered to define execution timings for the application programs that execute operations at constant time intervals.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Mital et al as modified, by the teachings of Sugauchi et al, because including a cycle control table in which cycle data are entered to define execution timings for the application programs that execute operations at constant time intervals, would enable the system to set execution time for operations in cycle control tables within the databases in order to manage the schedule of various processes which need to be repeated at certain time intervals.

As to claim 14, Mital et al as modified teaches wherein, the hierarchical node database, includes effective period data that define the effective periods for the data records, the effective period data being stored as data entries in individual data fields (see Campbell et al, figures 3A-3C, 4, and 8, and see column 8, line 59 through column 9, line 10.)



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As to claim 15, Mital et al as modified teaches wherein each of the data records in the hierarchical node database (see Mital et al, figures 1 and 9, and see Campbell et al, figure 6) includes a fixed-length column in which only data entries having a constant size are stored (see Mital et al, figure 4, [Links Class] column, and see Campbell et al, figure 8, [START DATE] column) and a variable-length column in which only data having variable sizes are stored (see Mital et al, figure 4, [Display name] column, and see Campbell et al, figure 8, [DEPARTMENT] and [END DATE] columns.)

As to claim 16, Mital et al teaches a database system, for storing and managing data that is used by a plurality application programs to execute distinct operations (see Abstract), comprising:

a hierarchical node database, wherein data used for the application programs is stored as node data in data records (see Abstract, and see figures 1 and 9); and

a hierarchical link table (see column 8, lines 24-30, and see figures 1, 4, and 9), provided for each of the application programs (see column 8, lines 53-58), which comprises relationship data (see column 11, lines 45-51) that defines a hierarchical structure of the node data that is stored in the hierarchical node database.

Mital et al does not teach wherein the hierarchical node database includes effective period data for at least one data record that defines a time period when at least one data record is effective for each of the plurality of application programs.

Campbell et al teaches network resource manager system and method (see Abstract), in which he teaches wherein the hierarchical node database (see column 8, lines 2-43) includes

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effective period data (see column 8, line 63 through column 9, line 10) for at least one data record that defines a time period when at least one data record is effective (see figures 3A-3C, 4, and 8, and see column 9, lines 11-22) for each of the plurality of application programs (see column 2, lines 43-65, and see column 5, lines 65-67.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Mital et al to include wherein the hierarchical node database includes effective period data for at least one data record that defines a time period when at least one data record is effective for each of the plurality of application programs.

It would have been obvious to a person having ordinary skill in the art to have modified Mital et al by the teaching of Campbell et al, because wherein the hierarchical node database includes effective period data for at least one data record that defines a time period when at least one data record is effective for each of the plurality of application programs, would enable the user to define effective periods (start, end, and duration times) for data records and would further enable the user to obtain information on data records, such as the values of particular data elements at or during a certain period of time. Also, associating effective time periods with data records, enables the system to generate a response to a history query identifies for a particular time period, one or more data resources, the network activity initiated by those data resources and ownership data linked to those data resources, as taught by Campbell et al (see column 3, lines 33-36.)

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Mital et al as modified, still does not teach a cycle control table in which cycle data are entered to define execution timings for the application programs that execute operations at constant time intervals.

For this teaching, the applicant is kindly directed to the remarks and discussions made in claim 13 above, with regards to the teachings of Sugauchi et al.

***Allowable Subject Matter***

7. Claims 6-11 are allowed over the prior art made of record.

8. The following is a statement of reasons for allowance:

The prior art of record, Sugauchi et al (U.S. Patent No. 5,838,842), Mital et al (U.S. Patent No. 6,189,012), Campbell et al (U.S. Patent No. 6,292,801), Suver (U.S. Patent No. 6,016,497), Fehskens et al (U.S. Patent No. 6,438,591), and Lynch-Aird (U.S. Patent No. 6,240,402), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

a hierarchical node database for storing node data to be used by *a first and a second application program*;

*a first hierarchical link table for defining a first unique hierarchical structure* of the node data for use when the first application program is run, wherein *the first hierarchical link table* includes an identifier that *identifies the first application program*; and

*a second hierarchical link table for defining a second unique hierarchical structure* of the node data for use when the second application program is run, wherein *the second*

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*hierarchical link table* includes an identifier that *identifies the second application program*, as claimed in claim 6.

Claims 7-11 are allowed over prior art made of record because they are dependent from the allowed independent claim 6.

### ***Response to Arguments***

9. Applicant's arguments filed on 03-November-2004 with respect to the newly amended claims have been fully considered but they are moot in view of new grounds of rejection and/or they are not deemed persuasive:

In response to the applicant's arguments regarding the overcoming of the rejection made to claim 3, under 35 U.S.C. 112, second paragraph, the argument has been fully considered and is deemed persuasive. The amended claim 3 overcomes the 112(2) rejection, and the rejection is hereby withdrawn.

In response to the applicant's arguments, regarding claims 13 and 16, that "claim 13 was added to include the allowable features of claims 1 and 5", and "claim 16 was added to include the allowable features of claim 5 and 12", the arguments have been fully considered but are not deemed persuasive, because, as also noted by the applicant on the last paragraph of the remarks section (page 7, paragraph 3), "in the final office action, claim 5 was objected

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to as being dependent upon a rejected base claim, but the Office indicated that the claim would be allowable if re-written in independent form including all of the limitations of the base claim *and any intervening claims*” (emphasis added). The newly added claims 13 and 16 only include the limitations of the base claims 1 and 12 respectively, along with the limitation recited in the “objected to” (now canceled) claim 5. The newly added claims 13 and 16 do not include the limitations of the “*intervening claims*” (claims 3 and 4), upon which the previously noted “allowability” of dependent claim 5 was based. The updated search by the examiner revealed additional prior art, which the examiner used in the new grounds of rejection for the newly added claims, as detailed above.

10. Applicant's arguments presented in the After Final amendment, filed on 09-August-2004 with respect to the rejected claims 1, 3 and 4, in view of the cited references have been fully considered but they are not deemed persuasive:

In response to the applicant's arguments that “Campbell et al, also do not disclose or suggest the hierarchical link table includes effective period data that defines effective period for the defined hierarchical structure”, the arguments have been fully considered but are not deemed persuasive. Campbell et al teaches the above feature in column 8, lines 35-58, where a “link table” is read on “join table”, and in column 8, line 63 through column 9, line 10, as well as in figures 4 and 8.

In response to the applicant's arguments that "there is no motivation or suggestion to combine Mital et al and Campbell et al", the arguments have been fully considered but are not deemed persuasive, because the hierarchical link table including effective period data that defines effective periods for the defined hierarchical structure, would result in the user to be able to define effective time periods (start, end, and duration times) for data elements and would further enable the user to obtain information on data such as the values of particular data elements at or during a certain period of time. Also, as taught by Campbell et al, "a response to a history query identifies for a particular time period, one or more data resources, the network activity initiated by those data resources and ownership data linked to those data resources" (see column 3, lines 33-36.)

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to Database Systems and Control Tables in Databases in general:

| <b>Patent/Pub. No.</b> | <b>Issued to</b> | <b>Cited for teaching</b>                      |
|------------------------|------------------|--|
| US 6,118,792 A         | Beshai           | Common Memory Access with Control Cycle Tables |

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12. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (571) 272-4078. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (571) 272-4083.

tm

January 18, 2005

  
**SAM RIMELL**  
**PRIMARY EXAMINER**